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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

WALLENHORST, MAUREEN

ART UNIT PAPER NUMBER

1743

DATE MAILED: 11/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/699,510	WOLLENBERG ET AL.	
	Examiner	Art Unit	
	Maureen M. Wallenhorst	1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/19/05</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1 and 13-14 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 20 and 22-23 of copending Application No. 10/699,529. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims recite a method for producing a combinatorial library of different lubricating oil compositions by combining a major amount of a base oil of lubricating viscosity with a minor amount of an oil additive to form a plurality of lubricating oil composition samples, and placing the samples in a plurality of test reservoirs. In

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addition, both sets of claims recite analyzing the lubricating oil composition samples for property data.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kolosov et al (US 2004/0123650).

Kolosov et al teach of a high throughput testing method and apparatus for the screening of a library of material samples. The method and apparatus involve combinatorial chemistry that refers to the synthesis of a collection of diverse materials, and the screening of the materials for desirable performance characteristics and properties. The combinatorial approach can effectively evaluate much larger numbers of diverse compounds in a much shorter period of time. The apparatus taught by Kolosov et al includes a plurality of samples supported in wells

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on a substrate. Kolosov et al teach that the invention can be used to screen libraries of any flowable material that may be a commercial product itself or may be a portion of a commercial product. Exemplary commercial products that can be tested with the apparatus taught by Kolosov et al include lubricants and oils. The invention can be used to analyze the resulting properties of a particular flowing material, and to analyze the relative or comparative effects that an additive has upon a particular flowable material. Additives in a flowable material to be tested include a detergent, a flow modifier, etc. See paragraph nos. 0042-0043 in Kolosov et al. The screening for the effects of different additives upon the characteristics of a flowing material is performed by measuring various properties of the material samples present in the wells on the substrate. Properties measured include the viscosity, the density, the thermal degradation, the aging characteristics, the chemical composition and the agglomeration or sedimentation of the material samples. See paragraph no. 0065 in Kolosov et al. Once the characterizing properties of the samples are determined, the results may be mathematically combined in various combinations to provide figures of merit for the properties of interest. See paragraph no. 0066 in Kolosov et al. The sample size of each sample in the wells on the substrate is typically no greater than about 20 ml, more preferably no greater than about 5 ml, and most preferred, no greater than about 0.5 ml. See paragraph no. 0054 in Kolosov et al. To form an array of samples on the substrate, Kolosov et al teach that the samples and additives are dispensed into the wells with any suitable dispensing apparatus (i.e. an automated micropipette or capillary dispenser). The dispensing apparatus may have a heated tip, thus providing heating of the samples. Each sample is dispensed to an individually addressable region in the substrate. See paragraph no. 0053 in Kolosov et al. The plurality of samples can vary in number depending upon the intended use of

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the method, and the plurality of samples can form a library. A library comprises an array of two or more different samples spatially separated on a common substrate. Candidate samples within a library may differ in a definable and predefined way, such as in chemical structure, processing, mixtures of interacting components, the relative amounts of the components, the presence of additives and other reactant materials, etc. The samples are spatially separated on the substrate such that an array of samples is separately addressable for characterization thereof. The two or more samples can reside in separate containers formed as wells in a surface of a substrate or can be simply dispensed onto a common planar substrate. See paragraph no. 0057 in Kolosov et al. The apparatus taught by Kolosov et al comprises a stimulus generator 12 that applies power to a probe 14 for applying a stimulus to one or more samples 16 in the array or library of samples. The apparatus also includes a sensor or transducer 20 for monitoring a response of one or more of the samples 16 to the stimulus. The transducer 20 and the stimulus generator 12 are both in communication with a computer sub-system 23 such as a microprocessor or other computer for manipulating data. The computer sub-system 23 may be employed to receive and store data such as responses of samples 16, material properties of samples, etc. Additionally, the computer sub-system may be employed to command other components of the system such as the stimulus generator and the dispensing means, as well as to correlate responses of samples 16 to their respective material properties. See paragraph nos. 0067-0068 in Kolosov et al. The probe 14 may be translated, rotated, reciprocated or oscillated within the samples so as to mix the samples and subject them to different forces. See paragraph no. 0070 in Kolosov et al. For contacting the probe 14 and dispensing means with the samples 16, the samples may be moved relative to the probe 14, or alternatively, the probe 14 may be moved relative to the samples 16. Combinations

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of these motions may also occur serially or simultaneously. An automated system may be used to move the one or more probes and the dispensing means serially or simultaneously to the various samples of a library. A suitable automated system is a robotic system such as an XYZ robot arm that has a multiple axis range of motion such as in the orthogonal X, Y, and Z coordinate axes system. This automated system is part of or in communication with the computer sub-system 23. See paragraph nos. 0073-0074 in Kolosov et al. Kolosov et al also teach that a plurality of control samples having known material properties are also monitored in the libraries along with the samples so that the responses of the samples can be compared with the known material properties of the controls. The responses of the samples in the library can be related to the known material properties by a mathematical relationship.

Kolosov et al fail to specifically teach that the combinatorial chemistry method and apparatus for testing of commercial products can be used for the testing of a plurality of samples containing a base oil of lubricating viscosity and a lubricating oil additive in varying percentages. However, it would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the method and apparatus taught by Kolosov et al for such a purpose since Kolosov et al teach that the combinatorial chemistry method and apparatus is applicable to the testing of any commercial flowable product such as lubricants, and also teach that the products tested may include additives such as detergents, etc, therein. It also would have been obvious to one of ordinary skill in the art to combine the flowable sample products, such as lubricants, with additives either inside or outside of the sample wells taught in the substrate of Kolosov et al depending upon a user's particular preferences and the dispensing means available. It also would have been obvious to one of ordinary skill in the art to use any conventional type of

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mixing for combining and mixing the commercial products with the additives such as static mixing, ultrasonic agitation, etc. since all of these conventional types of mixing are equivalent at uniformly mixing an additive with a sample.

7. Claims 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kolosov et al in view of Shtein et al (US 2005/0087131). For a teaching of Kolosov et al, see previous paragraphs in this Office action. Kolosov et al fail to teach that the dispensing means for dispensing the samples to be analyzed onto the substrate used to form the library includes a mixing chamber connected to a nozzle.

Shtein et al teach of a method and apparatus for depositing material onto a substrate. The device 100 includes a dispenser having three different channels 110, 120 and 130 that all feed into a mixing chamber 140. A nozzle 150 is connected to the mixing chamber. A heating element 160 also serves to heat the liquids in the dispenser. The channels 110 and 120 contain materials for deposition onto a substrate 170. Each channel may contain a different material that flows into the mixing chamber 140. The materials are mixed in the mixing chamber 140, and then expelled from the dispenser through the nozzle 150 using pressure from a carrier gas. See paragraph no. 0029 and Figure 1 in Shtein et al.

Based upon the combination of Kolosov et al and Shtein et al, it would have been obvious to one of ordinary skill in the art at the time of the instant invention to use a dispensing means having a mixing chamber connected to a nozzle, similar to the configuration taught by Shtein et al, in the apparatus and method of Kolosov et al for dispensing samples onto an array to form a library of materials since Kolosov et al teach that any type of known dispensing apparatus may be used to deposit the samples on the substrate, and the use of the dispenser taught by

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Shtein et al would allow the fluids and additive materials to be both mixed and dispensed in a single operation.

8. Applicant's arguments filed August 30, 2005 have been fully considered but they are not persuasive.

Applicants are notified that the references on the Information Disclosure Statement filed on August 19, 2005 have been crossed out since these same references were already considered and made of record on the PTO-892 form attached to the Office action mailed on May 27, 2005.

The previous provisional rejection of the claims under the judicially created doctrine of obviousness-type double patenting made in the Office action mailed on May 27, 2005 is maintained since Applicants have not sufficiently amended the claims nor filed the appropriate terminal disclaimers in order to overcome this rejection.

The previous rejections of the claims under 35 USC 112, second paragraph made in the Office action mailed on May 27, 2005 have been withdrawn in view of Applicants' amendments to the claims and persuasive arguments.

Applicants argue the rejection of the claims under 35 USC 103 as being obvious over Kolosov et al by stating that nowhere does Kolosov et al disclose or suggest the method of preparing a plurality of sample candidate lubricating oil compositions containing a major amount of at least one base oil and a minor amount of at least one lubricating oil additive as recited in the instant claims, and that nothing in Kolosov et al would lead one skilled in the art to modify the system and method for testing the genera of flowable material with any of the broad tests disclosed therein and arrive at the specifically recited high throughput method for preparing lubricating oil additive compositions as recited in the instant claims. In response to this

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argument, it is noted that the reference to Kolosov et al teaches of the general analysis of a large number of diverse compounds and that the compounds analyzed can be lubricants having an additive therein. See paragraph nos. 0042-0043 in Kolosov et al. It is inherent that in a lubricant composition having an additive therein that the base lubricant oil is present in a major amount while the additive is present in a lesser minor amount. In the system taught by Kolosov et al, different lubricant compositions having additives therein are contained within test receptacles in an array or combinatorial library. Kolosov et al teach of the automatic dispensing of a flowable material and an additive into a plurality of test reservoirs, and teach of a robotic system for moving the plurality of test reservoirs relative to a dispensing means or moving the dispensing means relative to the test reservoirs. Although a large number of different types of flowable samples are taught by Kolosov et al as being analyzed in a high throughput manner in a combinatorial library by measuring many different parameters, the fact remains that the disclosure of Kolosov et al does teach of the analysis of lubricant compositions having additives therein in a high throughput manner by placing many different types of the lubricant compositions in a plurality of receptacles, automatically moving the receptacles to locations for measurement of parameters and measuring many different parameters of the samples including those associated with the long-term stability of the compositions. Therefore, the reference to Kolosov et al discloses all of the limitations of the instant claims with the exception of a multiplicity of lubricating oil compositions having an additive therein in different percentages. However, one of ordinary skill in the art would have found it obvious to prepare a plurality of lubricant oil compositions containing different percentages of an additive therein in the plurality of test reservoirs taught by Kolosov et al since Kolosov et al teach that the flowable material to

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be screened in the combinatorial library can be a lubricant oil having an additive therein and teach that in a combinatorial library, the plurality of samples prepared and deposited onto a substrate all differ from one another in a definable and predefined way such as the amount of materials included within the samples, the particular identity of the components in the samples, etc.

Applicants fail to argue the rejection of the claims under 35 USC 103 based upon Kolosov et al and Shtein et al other than to state that this additional reference does not cure the deficiencies as noted above with regards to Kolosov et al. Since Applicants' arguments with regards to Kolosov et al have been addressed above, no further comment on this reference or the secondary reference to Shtein et al will be provided.

For all of the above reasons, Applicants' arguments are not found persuasive.

9. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maureen M. Wallenhorst whose telephone number is 571-272-1266. The examiner can normally be reached on Monday-Wednesday from 6:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden, can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Maureen M. Wallenhorst
Primary Examiner
Art Unit 1743

mmw

May 16, 2005

Maureen M. Wallenhorst
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